

Patent claims

1. Flap-type grinding tool, which is configured symmetrically about an axis of rotation (1), having
- 5 a) a plurality of abrasive flaps (2) disposed on the periphery and/or end faces,
- b) a support body (4a, 4b, 12, 13, 14), on which the abrasive flaps (2) are fixed, and
- c) a device (5, 11) for connecting the flap-type
- 10 grinding tool to a drive apparatus,
- d) the support body (4a, 4b, 12, 13, 14) having at least one rotationally symmetrical lateral surface (6, 10), on which the abrasive flaps (2) are at least partly fixed,
- 15 characterized in that
- e) the support body (4a, 4b, 12, 13, 14) comprises at least one central element (7) configured as a disk (4a) which extends essentially radially to the axis of rotation (1) and the device for connecting the flap-
- 20 type grinding tool to a drive apparatus has at least one contact surface (8) formed by the disk (4a) for connecting the flap-type grinding tool to a drive apparatus, and
- f) the support body (4a, 4b, 12, 13, 14) additionally
- 25 comprises a carrier ring (4b) on whose radially outermost outside one of the lateral surfaces (6, 10) is formed approximately parallel to the axis of rotation (1) or at least inclined at less than 75° to the axis of rotation (1).
- 30 2. Flap-type grinding tool according to the preamble of claim 1 or according to claim 1, characterized in that
- the disk (4a) is sufficiently angled in the region of the contact surface (8) that the contact surface (8) is
- 35 disposed axially outside a body of rotation described by the outside edges of the abrasive flaps (2).
3. Flat-type grinding tool according to one of the preceding claims,

characterized in that

the disk (4a) is produced from a plastic, preferably a fiber-reinforced plastic, from aluminum or from steel.

4. Flap-type grinding tool according to one of the preceding claims,

characterized in that

the carrier ring (4b) is produced from a plastic, preferably a fiber-reinforced plastic, from a hard rubber, from a hard paper, from aluminum or from steel.

5. Flap-type grinding tool according to one of the preceding claims,

characterized in that

carrier ring (4b) and disk (4a) are produced from different materials.

6. Flap-type grinding tool according to one of the preceding claims,

characterized in that

carrier ring (4b) and disk (4a) are connected to one another by press-fitting, bonding or welding.

7. Flap-type grinding tool according to one of the preceding claims,

characterized in that

the disk (4a) is formed by an automatically acting eccentric or centrifugal force clamping apparatus (13, 14, 15, 16).

8. Flap-type grinding tool according to one of the preceding claims,

characterized in that

the support body (4a, 4b, 12, 13, 14) has a plurality of disks (4a).

9. Flap-type grinding tool according to the preamble of claim 1 or according to one of the preceding claims,

characterized in that

abrasive flaps (2) are disposed both on the periphery (9) and on one end face (10) of the flap-type grinding tool.

10. Flap-type grinding tool according to the preamble of claim 1 or according to one of the preceding claims, characterized in that

5 the support body (4a, 4b, 12, 13, 14) has a device for connecting the flap-type grinding tool to a rapid clamping apparatus for connecting the flap-type grinding tool to a drive apparatus.

11. Flap-type grinding tool according to claim 10, characterized in that
10 the device for connecting the flap-type grinding tool to a rapid clamping apparatus is adapted to form part of a socket connection or bayonet connection.

12. Flap-type grinding tool according to claim 10, characterized in that
15 the device for connecting the flap-type grinding tool to a rapid clamping apparatus comprises a single-pitch or multipitch screw or nut thread, the thread being a coarse-pitched thread, preferably a rectangular or
20 trapezoidal thread.

13. Flap-type grinding tool according to the preamble of claim 1 or according to one of the preceding claims, characterized in that

25 the device for connecting the flap-type grinding tool to a drive apparatus comprises a shaft (11) connected to the support body (12) in a manner fixed in rotation, and the support body (12) consists of a synthetic resin body, in which the abrasive flaps (2) and the shaft
30 (11) are directly embedded.

14. Flap-type grinding tool according to claim 13, characterized in that
the support body (12) is produced by at least partial casting of a plastic or synthetic resin into a space
35 formed between the abrasive flaps (2), positioned relative to one another, and the shaft (11).

15. Flap-type grinding tool according to claim 13 or 14,

characterized in that
the support body (12) consists at least partially of a
hard paper (fiber material).

16. Rapid clamping apparatus for connecting a flap-
5 type grinding tool to a drive apparatus,
characterized in that

the rapid clamping apparatus is configured to interact
with a flap-type grinding tool according to one of
claims 10 to 12.

10 17. Flap-type grinding tool according to one of the
preceding claims,

characterized in that

the disk (4) is configured as a rapid clamping
apparatus according to claim 16.

15 18. Set comprising a flap-type grinding tool
according to one of claims 10 to 12 and a rapid
clamping apparatus according to claim 16.

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